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AUTHOR Russell, Joan
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ABSTRACT

This paper argues that verbal language plays a mediating role in the development of musical thinking. Two excerpts from the transcripts of conducting students' practica are interpreted. The verbal language that student conductors use during their rehearsals is a path to their musical thinking. Lev Vygotsky's social psychological theory of language offers a research-based theoretical framework to show the links between speaking and thinking. The study uses the two excerpts from the students' work to show how one student attempted to explain musical concepts, and the other used language to clarify and resolve a musical problem created by a desire to realize a musical concept. The paper implies that language has a great position in music teacher education courses because music-related talk is an essential part of students' formation as musicians and teachers. (Contains 62 references.) (EH)

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The mediating function of language in the formation of musical knowledge, musical concepts and musical problem-solving in instructional settings

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Joan Russell, PhD
McGill University
Faculty of Education
Department of Culture & Values
Phone (514) 398-2447
Email: cx2e@musica.mcgill.ca

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In the beginning there was the word.

Links between musical concepts and verbal language

Nick, a student music teacher is introducing a new piece to a beginning band made up of his peers. He has prepared the score for this rehearsal and is attempting to share with the players his understanding of the work's essential expressive qualities, and his procedural intentions:

> Okay, this piece ... for myself ... I'm going to explain to you how I felt about it when I first heard it ... when I first went through it okay? The manner of its set-up I find it's sort of like a fetus to a symphony ... it's very very ... it's almost like the first theme of a symphony which ... for my view ... I said well ... I think we're going to try to play it like that. We'll try to ... we're not going to start like that because it's going to be a little more complicated, but there are going to be changes to the actual parts ... not the notes but rhythm-wise and tempo-wise. So that's how ... my final project I will want ... is to have it like the beginning of a symphony ... almost like a Beethoven symphony ... okay? ... surprises, tempo changes, and of the sort. But for now we're just going to stick ... to the basics and work with what we have for now. That's just to let you know what I'm heading for okay? (Ref.N/Feb16)

I chose this excerpt from Nick's transcript[1] because it is a compelling example of an individual struggling to put musical concepts into words; at the same time it is clear that in the process of trying to explain his thoughts he is trying to form them.. This paper is an attempt to make the argument that verbal language plays a mediating role in the development of musical thinking. To illustrate how I think musical thinking and verbal language are linked I will interpret two excerpts from the transcripts of my conducting students' practica. One is the excerpt above, showing how an opportunity for explaining his musical ideas to others offered Nick a ~~means of~~ forum for formulating and clarifying what he found musically significant. The other illustrates how the necessity of communicating with a performing group ~~using~~ by means of language ~~as a tool~~ helped Edward to identify a musical problem and resolve it.

Terms and assumptions

In this paper, the rehearsal is a teaching situation and the conductor is a student music teacher engaged in the process of guiding an ensemble towards a satisfactory, or appropriate realization of a work that exists in notated form . The conductor actively shapes musical performances during rehearsals under the guidance of a score (Russell, 1995). The ensemble is made up of the conductors' peers, who are learning the rudiments of playing brass, woodwind and percussion instruments and as such, have inexpert technique. The conductor mediates the ~~score and the performance~~ of the score, with the collaboration of the ensemble.

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1 Nick was one of four music students whose rehearsal language I examined in my doctoral dissertation. (Russell, 1995) In order to investigate the role that verbal language was playing in my students' comprehension and construction of musical meanings in their practicum settings. Details about the data collection & interpretation are in NOTES at the end of this paper.

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Verbal language is one of the communicative channels used in the social activity of teaching in any subject; teaching music is no different. In rehearsals the music teacher uses language as a tool in the business of shaping a performance. But the language they used to express musical concepts, make musical judgements, identify musical problems and suggest ways to resolve them is much more than a simply a communicative channel from conductors to performers; it is also a means by which speakers engage in the process of reinforcing, formulating, and clarifying the musical concepts that they perceive are essential to the satisfactory performance of the work.

The verbal language that student conductors use during their rehearsals is a path to their musical thinking. Everything they say to the performers with respect to structuring and clarifying aspects of the musical works they rehearse reveals what they are thinking and gives clues to how they are forming their musical thinking. If we view their verbal language as a tool for formulating musical thinking and musical knowledge, we can come to a better understanding of the part that verbal language is playing in the development of students as "musical" beings.

The paper asserts that using verbal language, is an important tool in shaping student teachers' musical thinking. It concludes that speaking, or talk, or verbal articulation of one's thinking, plays a mediating role in the formation and concretization of the learner's musical knowledge, musical concepts and musical problem solving. An educational environment is a social context, as a channel of communication, the language used by participants in educational settings has a social function, and studying the language that students use in such situations has the potential to reveal much about what and how the student is learning. It concludes that students need opportunities to use verbal language in their music teaching practica because having to explain their musical concepts to others, to verbalize their musical decisions, and to give instructions to the performers are not only important for their formation as teachers, but are essential to the formation of their musical thinking.

Musical concepts and their realization

Conventional wisdom says that language and music are two different types of symbolic systems and as such the one cannot be used to express, exchange, capture or refer to meanings in the domain of the other. "Musical thinking" says Bamberger (in Gardner, 1983, p.110) "involves its own rules and constraints and cannot simply be assimilated to linguistic or logical-mathematical thinking". It is nevertheless the case that in instructional settings, regardless of the subject are, verbal language is an important channel of exchange. Anyone who has studied music has had encounters with teachers who were skilled players but who could not use language effectively in their teaching. Because language is used as a communicative channel in music instructional settings, it is important for music teacher

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education to better our understanding of the part that language plays, or has the potential to play, in the formation of students' musical thinking, musical concepts, and musical problem solving.

Musical concepts such as balance, or style, are intangible, elusive, ineffable and impossible to capture fully in words. During a performance, however, we gain some insight into the performers' understanding of what constitutes appropriate balance or style when they execute sounds in particular ways. Performers do not need to explain verbally; they only have to present. Musical performance problems involve understanding the links between the desired musical concept and the means to achieve it. Musical concepts are visions that individuals form of what might be, of something that is ideal, musically speaking and are best expressed and understood in the medium of sound, not words. In a teaching situation, the music teacher helps the students to bridge the distance between a concept and the performance acts that are appropriate to realizing that concept. For example, when Nick, a student conductor, invites the performers to play "A little lighter on the accompaniment still because I want to hear these guys just a bit more (Ref. N.Mar17)" he is engaged in the process of perceiving a musical problem, identifying it, and bringing to bear his judgement about what it means to balance accompaniment with a melodic line, and finding a resolution to a musical problem.

Views of language

Just as teachers in a range of subject domains use language as a tool, or means to communicate particular concepts, so do music teachers use language as a tool or means to communicate particular musical concepts. The concept of language as a means of communicating with others, or as a channel for conveying concepts to others suggests unidirectionality, from speaker to receiver. This image is incomplete, for it does not account for the fact that when we speak we are also in dialogue with ourselves (Halliday, 1978). When we speak, we are also using language as a tool to mediate our thinking, for language not only gives form to our thoughts, it helps us to clarify our thinking.

Learning the language that is appropriate to music teaching is a "rite of passage" (Howard, 1982) through which all musicians must pass, and it is certain that student music teachers must learn to make effective us of the "register" (Halliday, 1978) of music teaching, particularly the register of rehearsing. If the investigation stops here, language might be seen as unidirectional, serving to convey a speaker's ideas, or as a medium of exchange in which the speaker conveys thoughts or proposes actions (Halliday, 1978; Russell, 1995) and an audience interprets the speakers' meanings and intentions. From a Vygotskyian (1962, 1978, 1994a, 1994b, 1994c) perspective, language is seen as a mediator of thought, working recursively from thought to language, and back again from language to thought, so that the two are seen to be in tandem. Language is seen as a tool for the formulation of one's own thinking as well as a means for conveying one's thoughts to others.

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Vygotsky's social psychological theory of language offers a research-based, theoretical framework for understanding the links between speaking and thinking. Thought, he asserted, "does not merely find expression in speech; it finds reality and form" (1962, p. 126).

Vygotsky's social psychological theory

A psychologist in Russia in the nineteen twenties and thirties, Vygotsky was a leading figure in the sociohistorical school of developmental psychology. He developed research-based theories to explain the mediating function of language and he articulated a theory about the interdependence of thinking and speaking within the context of a social environment.

Task-based experimental method

Vygotsky developed an experimental method to study the process of concept formation. Vygotsky combined the perceptual and the symbolic in a series of experiments with 300 adults and children. His investigation focused on the functional conditions of concept formation. The process of concept formation requires that a problem arise that cannot be solved otherwise than through the formation of new concepts.

Subjects must be presented with a problem that needs to solved or a goal to be reached. The introduction of a problem has the effect of starting the subject's thought processes. The investigator engages the subject, posing problems in order to provoke thinking about solutions. The gradual introduction of the means of solution permits the study of the total process of concept formation in all its phases. The formation of the concept is followed by its transfer to other objects: the subject is persuaded to use the new terms in talking about objects beyond the experimental objects, and to define their meaning in a generalized fashion. Learning to direct one's own mental processes with the aid of words or signs is an integral part of the process of concept formation.

His experiments led him to claim and to demonstrate that the workings of the human mind were more satisfactorily understood not as discrete, isolated behaviors, but as a part of the social and historical contexts in which humans function. He posited that to discover how the intellectual functionings occur, it was necessary to create tasks, or problems, for his adult and child subjects to solve. He studied how they responded with and without the intervention of researchers who gently questioned, prodded and guided the subject. He examined how subjects arrived at solutions to the problems that he placed before them, paying particular attention to the role that their spoken language was playing as they groped for explanations that would make sense of the tasks before them and as they attempted to devise problem-solving strategies.

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Speech mediates the process of perception.

Vygotsky's experiments suggested that the child begins to perceive the world "not only through his eyes but also through his speech." Speech ... mediates the process of perception and becomes an "essential part" of the child's development (1978, p.32) Speaking plays a synthesizing function, which leads to more complex forms of cognitive perception. Naming the thing perceived gives it a form and a reality that it did not previously have. When Bresler (in Stake, Bresler & Mabry 1991), speaking of arts teachers whose work in schools she was studying says, "it struck me that teachers might not be aware that they lacked the vocabulary and appropriate conceptualizations" needed for arts education (p. 91), it strikes me that the concepts might be present in some form, but until they are verbalized in specific, focused teaching/learning situations they are condemned to remain murky, ill-defined and only dimly understood.

Vygotsky's importance to education

Vygotsky is an important figure in education because he created bridges between the domains of psychology and education. Vygotsky claimed that trying to establish what a child was able to achieve at any particular point in time did not go far enough; the more important task was to discover what a child might be capable of achieving under the guidance of someone with greater knowledge and expertise. In fact, Bruner, in his introduction to Vygotsky's Thought and language (1978), claims that Vygotsky's theory of intellectual development is actually a theory of education because Vygotsky's views on intellectual development are grounded in the conviction that development and intervention, or education in the broadest sense of the term--are inseparable.

Vygotsky's definition of intelligence is also relevant in important ways to education: he described intelligence as the capacity to benefit from instruction. Vygotsky's work as a psychologist is thus a social psychology, inseparable from issues of language (he speaks of the word or the sign) in social contexts, particularly educational or instructional. Of especial interest are Vygotsky's views on the relationship between speaking and thinking: he saw them as interdependent processes embedded in sociocultural contexts, of which educational settings are a prototype. He postulated that language used in social settings is a mediating tool through which thoughts take on concrete form and through which social activity transforms thought.

After Vygotsky's premature death in 1934 subsequent Soviet governments suppressed his work for several decades. His ideas only came to light in the west in the 1960's, and began to be disseminated with the publication of Thought and Language (1962), and Mind in Society (1978) and his ideas have since influenced the fields of education and psychology.

Vygotsky's influence in educational research

With our words, we . . . call our world into existence." (Britton, 1970) This phrase captures the underlying belief of the work of educational researchers of the London school of the 1970's. A group of neo-Vygotskyans broke research ground with classroom-based investigations of the role that language plays in students' learning, especially the role of peer talk (Barnes, 1976; Barnes, Britton & Rosen, 1971; Britton, 1970, 1992). These studies, carried out in naturally occurring settings, led to the realization that language does much more than provide a channel of communication for the speakers, it is a means by which they make sense of their worlds. The research showed how students talk themselves into understanding. Their investigations affirmed that speaking and thinking are reciprocal acts. Talk, they concluded, a means not just for expressing what one wants to say, but also for clarifying what one thinks.

Neo-Vygostkyans in a variety of fields and disciplines continue to investigate the mediating role of language from a social psychological perspective on development and learning (Halliday, 1975, 1978, 1985; John-Steiner, 1985; Moll, 1990; Laak, Heymans & Podol'skij, Eds., 1994; Wertsch & Stone. 1985, 1990). Second language education, language development, literacy, and language arts research (Dixon-Krauss 1996a; Edelsky, 1991; Goodman, Haussler & Strickland, 19__; Goodman, Smith, Meredith & Goodman 1987; Jennings & Xu Di 1996; John-Steiner, Panofsky, & Smith, Eds., 1994; Maguire, 1997 in press; Ramirez, 1994; Watson & Young 1986), mathematics education (Cordeiro, 1994; Zack, 1988, 1994), science education (Dixon-Krauss, 1996b, 1996c; Lemke, 1985, 1990) morality and culture (Brugman, 1994) are a just some of the fields that have felt and continue to feel the influence of his sociopsychological theory of development and learning and its socially-contextual embeddedness. Wells (1994) showed the compatibility of Halliday's sociolinguistic theory and Vygotsky's theory of language and thinking.

The role of talk in learning, whether peer-to-peer or student-to-teacher, continues to fascinate educational researchers. Webb's (1982) review revealed a number of studies that point to the importance of verbalizing material, particularly when the verbalizing involves trying to explain something to someone else. He pointed out that peer teaching is thought to be the best learning situation because the explainer does not assume that peers already have the knowledge. Proceeding on this assumption, it is claimed, they teach, or explain better. This has implications for student teachers who have opportunities to teach their peers before they try out their teaching in a classroom. Donaldson (1986) studied children's explanations. Other studies investigating aspects of talk and its relationship to learning include Berry (1985) Browne & Shrofel (1989), Dillon (1984), Edwards & Garcia (1994), Genishi, (1984), Hickman (1985), Hynds & Rubin (1990), Martin (1976), Searle (1984), Tannen (1982), Williams, Wilding & Henning (19__) and Wilkinson (1982). Hawkins (1983) looked at

argument in the context of mathematics teaching. He concluded that requiring children to verbally formulate information improves their understanding of the materials, especially in the context of argument. Young (1992) looked at talk in relation to learning in the domain of critical theory.[2]

Explaining, exploratory talk and solving problems

In his clinical experiments Vygotsky observed how his subjects explained things to the researcher who intervened with questions and requests for explanations and to themselves when they were left alone in the room with tasks to complete. A skillful researcher could gently probe the depths of the subject's thinking and elicit articulated responses that could then be analyzed and interpreted in terms of their meaning. He also presented subjects with problems and invited them to try to resolve them. He recorded how they talked their way through the problem, setting and re-setting it, seeking solutions. Again, the subjects responded to researcher's gentle questioning and probing and they also used talk to solve problems when they perceived that they were alone. In his analysis he moved recursively between the perceptual task and the use of the word, showing how they are linked and how they provide the evidence for the development of thought processes.

He concluded that concept formation is a function of the adolescent's total social and cultural growth. It affects not only the contents of the individual's thinking but also one's method of thinking. The significative use of the word – its use as a means of concept formation– is the immediate psychological cause of the radical change in the intellectual process. (p.59). Through the medium of words, speakers were using language to shape their own understandings. Thus thinking and speaking occur in tandem; they exist not separately but are in a reciprocal functional relationship. Thoughts are not fully formed in the mind, and then expressed in speech, but take on shape as the words give the thought concrete form. He put it like this:

> The structure of speech does not simply mirror the structure of thought; that is why words cannot be put on by thought like a ready-made garment. Thought undergoes many changes as it turns into speech. It does not merely find expression in speech; it finds reality and form. (1962, p.126)

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[2] However, as Stubbs (1976) and Cazden (1986) remind us, it is important to keep in mind that discourse practices are culture-specific and reflect the value that a community places on talk - who should speak, how one should speak, when it is appropriate to speak, what is appropriate to say, and so forth. The ways that a white suburban, middle class, white-collar English-speaking community uses language in learning contexts might look very different from the ways that one or another native American community, for example, might use language and in addition, the learning context might also look very different. Moreover, there may be significant variation in the speaking practices from household to household. These differences have implications for what is learned and how it is learned.

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Explaining musical ideas

Having an ideal conceptual vision of what a work of music might be guides the conductor through the rehearsal planning stage, the rehearsal itself, and the performance. A conductor might choose to share by means of verbal explanation his or her conceptual view of the work with the performers before beginning the rehearsal in an attempt to build a shared vision of the ideal performed end-state of the work. It is a way of preparing the performers conceptually for what is to come. With an explanation, the conductor can try to convey to the performers what he or she finds musically significant in the work (Russell, 1995).

What follows are two excerpts, or units of analysis (Vygotsky, 1962, 1978)[3] that illustrate Vygotsky's theory of thought-speaking links in a musical context. The first is Nick's attempt to explain musical concepts, and the second shows how talk led Edward to clarify and resolve a musical problem created by his desire to realize a musical concept.

In this excerpt, which I presented at the beginning of this paper, Nick is is attempting to explain his vision of the essence of the work to the ensemble of his peers. He begins haltingly:

> Okay, this piece ... for myself ... I'm going to explain to you how I felt about it when I first heard it ... when I first went through it okay? The manner of its set-up I find it's sort of like a fetus to a symphony ... it's very very ... it's almost like the first theme of a symphony which ... for my view ... I said well ... I think we're going to try to play it like that. We'll try to ... we're not going to start like that because it's going to be a little more complicated, but there are going to be changes to the actual parts ... not the notes but rhythm-wise and tempo-wise. So that's how ... my final project I will want ... is to have it like the beginning of a symphony ... almost like a Beethoven symphony ... okay? ... surprises, tempo changes, and of the sort. But for now we're just going to stick ... to the basics and work with what we have for now. That's just to let you know what I'm heading for okay? (Ref.N/Feb16)

Nick has an opportunity to articulate his concept of the work he is about to shape because he is an educational setting. The performers are waiting for him to begin rehearsing a new piece, and it is an appropriate moment for him to share with them his conceptualization of the essence of the piece and how he intends to proceed to realize that essence. Nick's attempt at explanation shows exploratory talk in the service of formulating musical concepts. The explanation is characterized by hesitations, unfinished thoughts, changes of directions, and general uncertainty. As a player in this ensemble, I would not have felt much more enlightened at the end of the explanation than I had been at its beginning. It is clear that in the attempt to explain his conceptual view of the work, he is clearly still

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[3] Vygotsky used the term to refer to a unit of meaning that is complete within itself. It represents a *gestalt* approach to analyzing language; it is an approach based on the notion of meaning. A unit of analysis is a verbal or language "event" that can stand alone: it has all the properties of a "whole", it cannot be divided without losing its meaning. A unit of analysis is not important for its composition, but for what it does.

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very much engaged in the process of exploring his own musical thinking. At this stage, before he has heard the performed version of the work, he seems to be conceptualizing it as having a symphonic quality. Whatever that may mean to him may become clearer in the course of rehearsals. What is significant is that in the process of attempting to explain what the piece is "about" to the performers, Nick is engaging in the process of forming those concepts. The path that he traveled in his attempt at such a description is marked by hesitations and turns, that in the end do not lead to a very clear picture of what he thinks. This suggests that his understanding of the work's expressive qualities was in the process of crystalization and that the opportunity to explain his ideas to the performers was a problem of the type that Vygotsky refers to: having to resolve the problem--explaining musical ideas to others--helped him in that process.

Solving performance problems

Conductors are called upon to find solutions to performance problems when they shape performances during rehearsals. They need to decide how the music should sound and they need to find ways to help the performers to achieve these ends, especially if they are working with novices of limited technique. Edward, another of the student music teachers in my study, talked his way through a musical problem during one of his conducting practica. He was rehearsing an arrangement for young band that featured a slow tempo and long phrases, a combination demanding good breath control. When he first introduced the work to the performers, he identified phrasing as an essential ingredient for a satisfactory performance: "In this, the phrasing is going to be very important, and it's going to be what makes the music work" (Ref. E/Mar15).

As the rehearsal progressed it became clear that many of the players were having difficulty sustaining the long phrases. As their conductor, Edward's task was not only to perceive that there was a problem, but to name it and to find ways of addressing it. He stops the rehearsal and names duration as the problem: He observes:

> The first thing I want to establish is that the notes are too long.

Next, he predicts that because the notes are too long, the players will have difficulty completing the phrase: If they continue to play their notes "too long", he predicts:

> ... you're going to run out of breath, so much so that by the time you get-

Here, Edward stops, reformulates the musical problem and shifts the focus from one of the players' performance behaviours to his own. The problem, it seems, is not that the notes are too long, but that his tempo is too slow, and the players cannot sustain the phrase at his chosen tempo:

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you can see right now that we're going to have to take it faster, because we're going to run out of breath by the time we get to the first breath mark at 4.

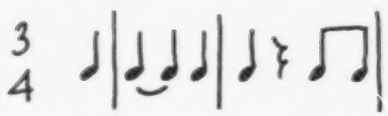
Having talked his way into a realization of the source of the problem, a too-slow tempo, he then formulates a solution:

So, take it faster.

Seeking to find solutions that will allow the phrase to flow with the least disturbance he returns to the matter of duration, instructing the players to:

Cut off the notes slightly shorter

But the instruction is incomplete because it is clear that the solution does not lie in playing all the notes shorter. Next he clarifies and makes more precise his suggestion to make the notes shorter. He models the phrase at a faster tempo, taking a quick, subtle breath at a judicious moment: in the middle of the phrase after the long note and just before the anacrusis:



bah; Bah- bah; Bah off bahdah;

Finally, he summarizes his musical reasoning that has led to his resolving the conflict between the need to have a smooth phrase and the novice players' inability to sustain it without a breath:

So it gives you a chance to breathe, if you cut off the half-note on beat two. (Ref. E/Mar.5)

This excerpt is an excellent example of how a music student engaged in a teaching activity used talk as a mediating tool to clarify a musical problem, and then to arrive, through a series of steps, at a resolution. First he engaged in problem-setting (Schon 1983, 1987) albeit incorrectly. Next he reformulated the problem and then proceeded to arrive at two possible solutions. In the social context of his conducting practicum, talk enabled Edward to proceed through a series of steps to new understandings of the relations between a desired musical concept--smooth phrasing-- and its realization by changing the tempo, and inserting an extra breath. Edward's decision to model the phrase finally allowed him to acquaint the players with his musical decisions in a more direct and musically meaningful way. However, the sequence of events in this excerpt and his final summary linking the musical concept and the performance problem suggests that the model became clarified to him as a consequence of process of talking his way through both a definition of the problem and proposals for its solution.

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This excerpt illustrates that musical learning takes place when students grapple with real problems that music teachers deal with in rehearsals. The opportunity for verbal problem-setting and resolution made it possible for Edward to grasp in a concrete way that beginning students on wind instruments have difficulty sustaining long slow phrases, but that creative approaches can be found to help them to resolve those musical problems in ways that satisfy both the requirements of the musical score and the need for performers to execute actions that are appropriate to their developing technique.

What absence of, or minimal talk might mean

One of the students of my study was a young woman from a region of Quebec where English is seldom heard. Her mother tongue was French, and she had been speaking English only for about one year. She lacked fluency in English and often had difficulty expressing herself "Some, some go ... uh ... uh ... how you say that?... longer, okay, than it's written..." (Ref.L/Feb18). My analysis of her transcripts revealed that she never talked about her conceptual view of the pieces she rehearsed, she seldom offered a rationale for her musical decisions, and she seldom addressed specific performance problems. The pattern of her rehearsals was to have the performers repeatedly play the same section with little comment. One possible interpretation of Laura's minimal use of talk during her practica, one is that her lack of fluency in English could very well have been a barrier to her verbal engagement. If this was the case, and if it is also the case that using language in a practica is an important part of the learning process, then there could be implications for students engaged in such studies in a language with which they lack fluency.

Thoughts for further dialogue and discussion

The study has implications for music teacher education because the conventional belief is that language has little place in the study and practice of music. Understanding the role of verbal language in music teacher education is important because music-related talk is an essential part of students' formation as musicians and as teachers.

Opportunities for verbalizing ~~are made available~~ when students engage in teaching others, particularly inexpert performers who need many suggestions and much guidance. Teaching in a rehearsal setting is unique in that it requires music student teachers to articulate their musical ideas and to give instructions to the ensemble about executing those ideas. Verbalizing during their conducting practica is an essential aspect of the learning process and student music teachers need to be encouraged to articulate their musical ideas, to give explanations for their musical decisions, and to explain how they arrive at solutions to performance problems.

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The links between language and musical thinking is a research topic that is in its infancy but it offers the possibility of deepening our understanding of how we come to think, musically. While it is indisputable that musical messages are transmitted through the baton, it is inconceivable that expert baton technique can be developed independently from conceptual development and it is likely that language is one of the tools for developing musical concepts. The idea that in the act of teaching music we are engaged shaping our own musical thinking asks us to reconceptualize and to acknowledge the role that talk plays in that process.Talk as a tool for learning in the context of teaching practica cannot be underestimated. In a practicum, closer attention should be paid to the language that the students use - as language related functionally to their learning. By attending to what the students say it is possible to come to some understanding of how they are forming their own musical thinking..

Regarding speakers of languages other than the language of instruction, at the very least, teacher educators need to be very sensitive to the plight of students who lack proficiency in the language that prevails in an institution and a classroom, and at the most, creative ways need to be found to help such students make the best use of all the learning tools that are available to them.

A final notes

The study led me to understand the role that my student conductors' language was playing in the formation of their musical knowledge and understanding in a conceptually different way. It became clear that they were doing much more than using language as a means of communication with the players. As they spoke it became evident to me that they were actually exploring and forming their own knowledge. Thinking about language as a mediating tool has challenged me to examine my own teaching , to seek to further understand the links between musical knowledge and verbal language and to seek ways of using this understanding for educational purposes.

NOTES

The data

The data for the study from which the excerpts in this paper are drawn were collected during several 13-week semesters at McGill University's Faculty of Music. The students were chosen from among 14 music education students in my Instrumental Conducting course. This class met three times per week as a seminar and conducted their peers in a conducting practica twice per week with an ensemble of their peers under my supervision. I videotaped all of the practica and I exchanged written reflections with each student after each practicum. The videotapes were used for review and discussion and the dialogue journals allowed the students and me to select and comment upon those events that

we deemed to be significant. This method of collection resulted in a databank of videotapes and journals that were gathered in a natural classroom setting, where participants did what they normally did. The data collected were of a different order than they might have been had they been collected under experimental conditions, or if the activities had been driven by a research agenda. The naturalistic setting for the collection of data ensured a natural flow of verbal and written discourse. Permission to use the data for the study was obtained from the selected students in writing at a later date.

Data analysis and interpretation

I selected four students on the basis of observable differences in the ways in which they used rehearsal language and generally carried out the business of rehearsing. For the analysis I selected 3 rehearsals each and I examined those portions that related to the rehearsal of scores (as distinct from warmups or technical exercises). Using a functional-theoretical interpretive framework derived from Halliday's (1975, 1978, 1985) socio-functional theory of language use, and Vygotsky's (1962, 1978) definition of what constitutes a Unit of Analysis I analyzed, coded and interpreted the students' utterances anc classified them according to their function in the rehearsal, their topical focus and I grouped them according to the rehearsal context in which they uttered them. They used verbal language in three consistently recurring rehearsal contexts: prior to PLAY, during PLAY and after PLAY. They also used verbal language when they chose to speak about their pieces the first time they introduced them in a rehearsal. Their utterances served three functions in the setting: Proposals for musical actions, Appraisals of those actions, and explanations about the qualities of the work. In a Hallidayian theoretical-functional view, appraisals and explanations are functionally the same as neither calls for an action to ensue. Proposals were sometimes accompanied by rationales and sometimes not. Appraisals were sometimes elaborated ("it's the G sharp which is not coming out") and sometimes not ("That was good.!"). Some students offered their vision of the works they were about to rehearse and some did not.

References

Barnes, D. (1976). From communication to curriculum. Harmondsworth, Middlesex: Penguin Books.

Barnes, D., Britton, J., & Rosen, H. (1971). Language, the learner, and the school. Harmondsworth, England: Penguin Books.

Berry, K. S. (1985). Talking to learn subject matter/Learning subject matter talk. Language Arts, 62(1), 34-42.

Britton, J. (1970). Talking to learn. In Language, the learner and the school Portsmouth, NH: Boynton-Cook.

Britton, J. (1992). Language and learning. (2nd ed.) Harmondsworth, Middlesex, UK: Penguin.

Browne, N., & Shrofel, S. (1989). Talking all the way to knowledge. Canadian Music Educator (Research Edition), 31(1), 22-46.

Brugman, D. (1994) Moral culture in institutions and individuals' moral performance: The need for moral developmental tasks. In Jan ter Laak, Peter Heymans, and Andrei Podol'skij, Eds. Developmental tasks: towards a cultural analysis of human development. Dordrecht; Boston: Kluwer Academic Publishers.

Cazden, C. John-Steiner, V. & Hymes, D. (1985). Functions of language in the classroom. Prospect Heights, Illinois: Waveland Press, Inc.

Cazden, C. (1986). Classroom discourse. In M. Wittrock, Ed. Handbook of research on teaching. New York: MacMillan Publishing Company.

Cordeiro, P. (1994) Vygotsky in the classroom: An interactionist literacy framework in mathematics. In Vera John-Steiner, Carolyn Panofsky, and Larry Smith, Eds., Sociocultural approaches to language and literacy: An interactionist perspective. Cambridge; New York: Cambridge University Press.

Dillon, D. (1984). Editorial: Talk. Language Arts, 61(2), 115.

Dixon-Krauss, L. (1996). Spontaneous and scientific concepts in content-area instruction. In Lisbeth Dixon-Krauss, Ed., Vygotsky in the classroom: Mediated literacy instruction and assessment. White Plains, NY: Longman Publishers.

Dixon-Krauss, L. (1996). Vygotsky's sociohistorical perspective on learning and its application to Western literacy instruction. In Lisbeth Dixon-Krauss, Ed., Vygotsky in the classroom: Mediated literacy instruction and assessment. White Plains, NY: Longman Publishers.

Dixon-Krauss, L. Ed. (1996). Vygotsky in the classroom: Mediated literacy instruction and assessment. White Plains, NY: Longman Publishers.

Donaldson, M. L. (1986). Children's Explanations. New York: Cambridge University Press.

Edelsky, C. (1991). With literacy and justice for all: Rethinking the social in language and education. New York, NY: Falmer Press.

Edwards, P., and Garcia, G. (1994). The implications of Vygotskyan theory for the development of home-school programs: A focus on storybook reading. In Vera John-Steiner, Carolyn Panofsky, and Larry Smith, Eds., Sociocultural approaches to language and literacy: An interactionist perspective. Cambridge; New York: Cambridge University Press.

Gardner, H. (1983). Frames of mind: The theory of multiple intelligences. New York: Basic Books.

Genishi, C. (1984). Research currents: What is a context for learning through language. Language Arts, 61(1), 52-58.

Goodman, K. and Goodman, Y. (1990). Vygotsky in a whole language perspective. In

Goodman, Y., Haussler, M. & Strickland, D.S. Eds. (19**). Oral and written language development research: Impact on the schools. Urbana, Illinois: National Council of Teachers of English.

Goodman, K., Smith E., Meredith, R. & Goodman, Y. (1987).Language and thinking in school: A whole language curriculum. (3rd ed.). New York: Richard C. Owen Publishers, Inc.

Halliday, M.A.K. (1975). Learning how to mean: Explorations in the development of language. London: Edward Arnold (Publishers) Ltd.

Halliday, M.A.K. (1978). Language as a social semiotic: a social interpretation of language.

Halliday, M.A.K. (1985) Language, context, and text. Geelong, Vic.: Deakin University Press.

Hawkins, (1983.

Hickmann, M. (1985). The implications of discourse skills in Vygotsky's developmental theory. In James Wertsch, Ed. Culture, communication and cognition: Vygotskian perspectives. Cambridge: Cambridge University Press.

Howard, V. (1982). Artistry: The work of artists. Indianapolis: Hackett Publishing Company.

Hynds, S., & Rubin, D. L. (Eds.) (1990). Perspectives on talk and learning. National Council of Teachers of English.

Jennings, C. and Xu Di (1996). Learning and thinking: The Vygotskian approach. In Lisbeth Dixon-Krauss, Ed., Vygotsky in the classroom: Mediated literacy instruction and assessment. White Plains, NY: Longman Publishers.

John-Steiner, V. (1985). Notebooks of the mind: Explorations of teaching. New York, NY: Hasen and Raw Publishers.

BEST COPY AVAILABLE

John-Steiner, V., Panofsky, C. and Smith, L. Eds., (1994). Sociocultural approaches to language and literacy: An interactionist perspective. Cambridge; New York: Cambridge University Press.

Lemke, J.L. (1985). Using language in the classroom. Waurn Ponds: Deakin University Press.

Lemke, J. L. (1990). Talking science: Language, learning, and values. Norwood, New Jersey: Ablex Publishing Corporation.

Maguire, M. (1997 in press). A bilingual child's choices and voices: Lessons in noticing, listening and understanding. Franklin, B. et al. Reading and writing in more than one language. TESOL.

Martin, N., Williams, P., Wilding, J., Hemmings, S., & Medway, P. (1976). Understanding children talking. Harmondsworth: Penguin Books.

Matthews, M. (1996). Vygotsky and writing: Children using language to learn and learning from the child's language what to teach. In Lisbeth Dixon-Krauss, Ed., Vygotsky in the classroom: Mediated literacy instruction and assessment. White Plains, NY: Longman Publishers.

Moll, L., Ed. (1990) Vygotsky and Education: Instructional implications and applications of socio-historical psychology. New York: Cambridge University Press.

Price (1982).

Ramirez, J. (1994). Adults learning literacy: The role of private speech in reading comprehension. In Vera John-Steiner, Carolyn Panofsky, and Larry Smith, Eds., Sociocultural approaches to language and literacy: An interactionist perspective. Cambridge; New York: Cambridge University Press.

Russell, J. (1995). An investigation of the role of language in student conductors' comprehension and construction of musical meanings in practicum settings. Ph.D. Thesis. McGill University.

Schon, D. (1983). The reflective practitioner: How professionals think in action. New York: Basic Books.

Schon, D. (1987). Educating the reflective practitioner. San Francisco: Jossey-Bass Publishers.

Searle, D. (1984). Talk and learning in the classroom: An interview with Anthony Adams. Language Arts, 61(2), 119-124.

Stake, R., Bresler, L., & Mabry, L. (1991). Custom and cherishing: The arts in elementary schools. Urbana, IL: National Arts Education Research Center, University of Illinois.

Stubbs, M. (1976). Language, schools and classrooms. London: Methuen.

Tannen, D. (Ed.). (1982). Analyzing discourse: Text and talk. Washington, DC: Georgetown University Press.

Ter Laak, J., Heymans, P., and Podol'skij, A., Eds. (1994). Developmental tasks: towards a cultural analysis of human development. Dordrecht; Boston: Kluwer Academic Publishers.

Vygotsky, L. (1962). Thought and language. Edited and translated by Eugenia Hanfmann and Gertrude Vakar. Cambridge, MA: The M.I.T. Press.

Vygotsky, L. (1978). Mind in society: The development of higher psychological processes. Michael Cole, Vera John-Steiner, Sylvia Scribner and Ellen Souberman, Eds. Cambridge, MA: Harvard University Press.

Vygotsky, L. (1994a). The development of academic concepts in school aged children. In Rene van der Veer and Jaan Valsiner, Eds. The Vygotsky reader. Cambridge, MA: Blackwell.

Vygotsky, L. (1994)b. The development of thinking and concept formation in adolescence. In Rene van der Veer and Jaan Valsiner, Eds. The Vygotsky reader. Cambridge, MA: Blackwell.

Vygotsky, L., and Luria, A. (1994c). Tool and symbol in child development. In Rene van der Veer and Jaan Valsiner, Eds. The Vygotsky reader. Cambridge, Mass.,: Blackwell.

Watson, K., & Young, B. (1986). Discourse for learning in the classroom. Language Arts, 63(2), 126-133.

Webb, N. M. (1982). Student interaction and learning in small groups. Review of Educational Research, 52(3), 121-145.

Wells, G. (1994). The Complimentary Contributions of Halliday and Vygotsky to a "Language-Based Theory of Learning." Linguistics and Education, 6:1, 41-90.

Wertsch, J. (1990). The voice of rationality in a sociocultural approach to mind. In Moll, L. Ed., Vygotsky and Education: Instructional implications and applications of socio-historical psychology. New York: Cambridge University Press.

Wertsch, J., Ed. (1985). Vygotsky and the social formation of mind. Cambridge, MA: Harvard University Press.

Wertsch, J, and Stone, C. (1985). The concept of internalization in Vygotsky's account of the genesis of higher mental functions. In James Wertsch, Ed., Culture, communication and cognition: Vygotskian perspectives. Cambridge: Cambridge University Press.

Wilkinson, L. C. (Ed.). (1982). Communicating in the classroom. New York: Academic Press.

Young, R. (1992). Critical theory and classroom talk.

Zack, V. (1988) Dyadic interaction in an elementary school computer lab classroom, and the learning of Logo geometry concepts. Doctoral thesis. McGill University.

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